

CLAIMS

1. A process for separating between liquids extracted from whole plants or plant parts and the solid plant residue, and performing concurrent sterilization of both substances comprising:
 - a) fast deep-freezing said whole plant(s) or parts thereof;
 - b) crushing the deep-frozen whole plant(s), or parts thereof, thereby obtaining a bioextract;
 - c) defrosting said bioextract mixture so as to allow drainage of the liquids from the defrosted bioextract mixture; and,
 - d) separating between the liquids and the solid substance of the defrosted bioextract mixture such that a sterile product is obtained.
2. The process according to claim 1, wherein the separated liquids are further filtered and sterilized, the sterilization comprising employment of one or more "freeze-defrost" cycles, each cycles including one fast deep-freeze of the liquid(s) followed by one fast defrost of the frozen liquid(s).
3. The process according to claim 1, wherein the separated solids substances are further homogenized by processing the solid substances to an average particle size of no more than about 0.6 micron, and sterilized by employment of one or more "freeze-defrost" cycles, each cycle including one fast deep-freeze of the liquid(s) followed by one fast defrost of the frozen liquid(s).
4. The process according to claims 2 or 3, wherein in each freeze-defrost cycle, the liquids/solids substances are kept frozen at a temperature within the range of about -130°C to -197°C for a period of about 10 seconds, after which the frozen liquids/solids are fast defrosted to a temperature within the range of about 15°C ÷ 20°C, by immersing them in hot liquid, whose initial temperature is between about 80°C and 90°C.
5. The process according to any of claims 2 to 4, wherein in each cycle of the sterilization process, the liquids/solids substances are frozen by utilizing liquid nitrogen.

6. The process according to any of the preceding claims, wherein the sterilized liquids and solids substances are utilized as ingredients in cosmetic, food, beverage, nutraceutical and pharmaceutical compositions by mixing them with at least one intermediately;
7. The process according to claim 6, wherein the intermediately is an option.
8. The process according to any of the preceding claims, further characterized by at least one of the following features:
 - a) at least one of the plants belongs to the labiate family;
 - b) at least one of the plants is selected from the group of: Lavandula, Melissa, Mint, Ocimum, Origanum, Preslia, Rosmarinus, Salvia, Thymus;
 - c) leaves and/or shoots of the plant(s) are processed together with, or separately from, roots thereof; and/or
 - d) the mixing stage is preceded by washing the solid residues with a solvent selected from water and organic solvents, and the washed solid residues are subjected to homogenization and/or dehydration by freezing.
9. The process according to any of the preceding claims, which the process is utilized for making cosmetic, food, beverage, nutraceutical or pharmaceutical compositions, by: removing the liquids from whole plants, or parts of plants, after separating between the liquids and solids substances thereof, and mixing the residual solids substances, in particular the cell wall, with at least one cosmetically or pharmaceutically acceptable carrier, diluent, solvent or extractant.
10. The process according to any of claims 1 to 8, wherein the separated liquids and/or solid substances are utilized for making a beverage, by mixing the liquids and/or solids with at least one intermediately.
11. The process according to claim 10, wherein the intermediately is an option.

12. The process according to any of the claims 1 to 11, wherein the solids and liquids of plants, or of selected parts of plants are utilized as natural colorants, flavorings and/or aromatics
13. Cosmetic, food, nutraceutical or pharmaceutical composition, which comprises a natural mineral-rich plant tissue(s) component(s), which are obtainable by: deep-freezing whole plant(s) or parts thereof; crushing the frozen whole plant(s) or parts thereof to a powder with particles size within the range of 0.5 to 2 micron; defrosting the crushed product so as to allow drainage of liquids from the resulting bioextract; separating between said liquids and the solid substance(s) of the bioextract; and, mixing the solid substance(s) together with at least one acceptable carrier, diluent, solvent or extractant.
14. The composition according to claim 13, wherein at least one of the plants, utilized for making said composition, belongs to the labiate family.
15. The composition according to claim 13, which includes at least one plant selected from Lavandula, Melissa, Mint, Ocimum, Origanum, Preslia, Rosmarinus, Salvia and Thymus.
16. The composition according to claim 13, to which chlorophyll is added for protecting a skin.
17. The composition according to claim 13, wherein the solid substance(s) are homogenized by processing the solid substances to an average particle size of no more than about 0.6 micron, and sterilized, by employment of one or more "freeze-defrost" cycles, each cycle including one fast deep-freeze of the liquid(s) followed by one fast defrost of the frozen liquid(s).
18. The composition according to claim 17, wherein in each freeze-defrost cycle, the tissues are kept frozen in a temperature within the range of about -130°C to -197°C for a period of about 10 seconds, after which the frozen liquids/solids are fast defrosted to a temperature within the range of about 15°C ÷ 20°C , by

immersing them in hot liquid, whose initial temperature is between about 80 °C and 90 °C.

19. The composition according to any of claims 17 to 18, wherein in each cycle of the sterilization process, the tissues are frozen by utilizing liquid nitrogen.
20. Composition according to any of the claims 13 to 19, wherein the tissues are utilized as natural colorants, flavorings and/or aromatics.